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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Karthik Ramani et al.

Title: METHODS, SYSTEMS, AND DATA STRUCTURES FOR PERFORMING SEARCHES ON THREE DIMENSIONAL OBJECTS

Docket No.: 1165.021US1
Filed: January 23, 2004
Examiner: Unknown

Serial No.: 10/763,741
Due Date: N/A
Group Art Unit: 2173

MS Amendment


Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ Return postcard.
- ☒ Information Disclosure Statement (2 pgs.), Form 1449 (9 pgs.), and copies of 133 cited documents, including the International Search Report for corresponding PCT Application No. PCT/US2004/001962 (9 pgs.).

If not provided for in a separate paper filed herewith, Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
Customer Number 21186

By: 
Atty: Joseph P. Mehrle
Reg. No. 45,555

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JAMES KAUYUSIK
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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
(GENERAL)

S/N 10/763,741



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Karthik Ramani et al.	Examiner:	Unknown
Serial No.:	10/763,741	Group Art Unit:	2173
Filed:	January 23, 2004	Docket:	1165.021US1
Title:	METHODS, SYSTEMS, AND DATA STRUCTURES FOR PERFORMING SEARCHES ON THREE DIMENSIONAL OBJECTS		

INFORMATION DISCLOSURE STATEMENT

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicant respectfully requests that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicant requests that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicant with the next official communication.

Several of the documents, listed on the attached 1449, were discovered as a result of a Search Report in Applicant's corresponding foreign patent application. Enclosed for the Examiner's information is a copy of the cited documents and the Search Report.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.

INFORMATION DISCLOSURE STATEMENT

Serial No: 10/763,741

Filing Date: January 23, 2004

Title: METHODS, SYSTEMS, AND DATA STRUCTURES FOR PERFORMING SEARCHES ON THREE DIMENSIONAL OBJECTS

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Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications are no longer required to be provided to the Office. Notification of this change was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004. Thus, Applicant has not included copies of the U.S. Patent and Published Application cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicant's Representative at the below-listed telephone number if there are any questions regarding this communication.

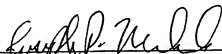
Respectfully submitted,

KARTHIK RAMANI ET AL.

By their Representatives,

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Date 8-31-05

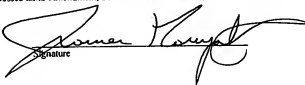
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STATEMENT BY APPLICANT**
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Application Number	10/763,741
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First Named Inventor	Ramani, Karthik
Group Art Unit	2173
Examiner Name	Unknown

Sheet 1 of 2

Attorney Docket No: 1165.021US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
	US-2002/0051576 A1	05/02/2002	Choi, Y., et al.	12/14/2000
	US-6,347,313	02/12/2002	Ma, W., et al.	03/01/1999

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T*
	EP-1202187A2	05/02/2002	Liu, W., et al.	
	GB-2349493A	11/01/2000	Miroslaw, B.	
	WO-01/46857A2	06/28/2001	Rioux, M., et al.	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T*
		"International Search Report for PCT Application No. PCT/US2004/001962", (Attorney Docket No. 1165.021WO1), (07/21/05), 9 pgs.	
		ABBASI, S., "Affine-Similar Shape Retrieval: Application to Multiview 3-D Object Recognition", <u>IEEE Transactions on Image Processing</u> , 10(1), (January 2001), 131-139	
		ALBER, I. E., "Retrieval of Multi- and Hyperspectral images using an interactive Relevance Feedback Form of Content - Based Image Retrieval", <u>Proceedings of SPIE - The International Society for Optical Engineering</u> , Vol. 4384, (2001), 56-66	
		AMBLER, A. P., "A Versatile Computer-Controlled Assembly System", <u>Proceedings of Third International Joint Conference on Artificial Intelligence, Section II Robot Implementations</u> , (1973), 298-307	
		ANDREWS, W. S., "An Application of Artificial Neural Network Technology to Satellite Imagery Data to Support Search and Rescue Operations", <u>Canadian Aeronautics And Space Journal</u> , 45(4), (1999), 335-341	
		ANKERST, M., "3D Shape Histograms for Similarity Search and Classification in Spatial Databases", <u>Proceedings 6th International Symposium on Spatial Databases (SSD'99), Lecture Notes in Computer Science</u> , (1999), 207-226	
		ARCELLI, C., "Euclidean Skeleton Via Centre-of-Maximal-Disc Extraction", <u>Image and Vision Computing</u> , 11(3), (1993), 163-173	
		ASCHER, M. et al., "A Methodology for automatic retrieval of similarly shaped machinable components", <u>IEEE International Conference on Systems, Man, and Cybernetics</u> , 5, (2001), 2840-2845	
		ATTALI, D., et al., "Computing and Simplifying 2D and 3D Continuous Skeletons", <u>Computer Vision and Image Understanding</u> , 67(3), (Article IV970536, (1997), 261-273	

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* EXAMINER: Initial if reference considered, whether or not citation is in compliance with MPEP 509. Draw line through citation if not in compliance and not considered. Include copy of this form with next communication to applicant. (Amended by PTO 01/2002) (USPTO Form 1449, Rev. 01/2002) (E-mail: uspto@uspto.gov)

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Sheet 2 of 9

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OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		BALASUBRAMANIAM, M., "Generating 5-Axis NC Roughing Paths Directly From a Tessellated Representation", <u>Computer-Aided Design</u> , 32, (2000), 261-277	
		BALLARD, D. H., et al., "Chapter 11 - Matching", In: <u>Computer Vision</u> , Prentice-Hall, Inc., Englewood Cliffs, NJ,(1982), 352-382	
		BALLARD, D. H., et al., "Chapter 8 - Representation of Two-Dimensional Geometric Structures", In: <u>Computer Vision</u> , Prentice-Hall, Inc., Englewood Cliffs, NJ,(1982), 231-263	
		BALLARD, D. H., et al., "Chapter 9 - Representations of Three-Dimensional Structures", In: <u>Computer Vision</u> , Prentice-Hall, Inc., Englewood Cliffs, NJ, (1982), 264-311	
		BARDINET, E., "Structural Object Matching", <u>Technical Report DECSAI-000303</u> , Department of Computer Science and AI, University of Granada, (2000), 9 pgs.	
		BARROW, H. G., "Subgraph Isomorphism, Matching Relational Structures and Maximal Cliques", <u>Information Processing Letters</u> , 4(4), (1976), 83-84	
		BERCHTOLD, S., et al., "S3: Similarity Search in CAD Database Systems", <u>ACM SIGMOD International Conference on Management of Data (SIGMOD '97)</u> , Tucson, AZ,(1997),564-567	
		BERCHTOLD, S., et al., "Section Coding: A Similarity Search Technique in the Car Manufacturing Industry", <u>Integrated Design and Process Technology, IDPT-Vol. 2</u> ,(1998),256-263	
		BERCHTOLD, S., et al., "Section Coding: Ein Verfahren zur Ähnlichkeitssuche in CAD-Datenbanken [Section Coding: a Technique for Similarity Search in CAD Databases]", <u>International Conference on Databases in Office, Engineering and Science</u> , (1997),152-171	
		BERCHTOLD, S., et al., "Using Extended Feature Object for Partial Similarity Retrieval", <u>The VLDB Journal</u> , Vol. 6, (1997), 333-348	
		BERG, E. V. D., "Web-Based Collaborative Modeling With SPIFF", <u>Delft University of Technology</u> , (2000),1-52	
		BIDARRA, R., "Collaborative Modeling With Features", <u>2001 ASME Design Engineering Technical Conferences</u> , (2001), 1-11	
		BORGEFORS, G., "Distance Transformations in Arbitrary Dimensions", <u>Computer Vision, Graphics, and Image Processing</u> , 27, (1984), 321-345	
		BOUET, M., et al., "Visual Content Based Retrieval in an Image Database with Relevant Feedback", <u>IEEE Computer Society, Proceedings of the International Workshop on Multi-Media Database Management Systems</u> , Dayton, OH, USA, (Aug 5, 1998), 98-105	
		BRESENHAM, J. E., "Algorithm for Computer Control of a Digital Plotter", <u>IBM Systems Journal</u> , 4(1), (1965), 25-30	

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Group Art Unit	2173
Examiner Name	Unknown

Sheet 3 of 9

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OTHER DOCUMENTS – NON PATENT LITERATURE DOCUMENTS

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		BUNKE, H., "Inexact Graph Matching for Structural Pattern Recognition", <u>Pattern Recognition Letters</u> , 1(4), (1983), 245-253	
		CANTERAKIS, N., "3D Zernike Moment and Zernike Affine Invariants for 3D Image Analysis and Recognition", <u>Proceedings of 11th International Conference on Image Analysis</u> , (1999), 8 pgs.	
		CHANG, C.-H., "Enabling Concept-Based Relevance Feedback for Information Retrieval on the WWW", <u>IEEE Transactions on Knowledge and Data Engineering</u> , 11(4), (1999), 595-609	
		CHEN, C., et al., "Content-Based Image Visualization", <u>Proceedings of the IEEE International Conference on Information Visualization</u> , Alamitos, CA, USA, (2000), 13-18	
		CHEN, L.-L., "Parting Directions for Mould and Die Design", <u>Computer Aided Design</u> , 25(12), (1993), 763-768	
		CHOU, H., et al., "A Flexible Interface Between Two-Dimensional Representation and Three-Dimensional Representation", <u>International Conference on Computer Integrated Manufacturing</u> , IEEE Computer Society, Center for Interactive Computer Graphics, (1988), 160-170	
		CHRISTMAS, W. J., "Structural Matching in Computer Vision Using Probabilistic Relaxation", <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , Vol. 17, No. 8, (1995), 749-764	
		COHEN-OR, D., "3D Line Voxelization and Connectivity Control", <u>IEEE Computer Graphics and Applications</u> , (November/December 1997), 80-87	
		CORNEY, J., "Coarse Filters for Shape matching", <u>IEEE Computer Graphics and Applications</u> , (2002), 65-74	
		CROSS, A., et al., "Genetic Search for Structural Matching", <u>Lecture Notes in Computer Science</u> , 1064, <u>Proceedings of the 4th European Conference on Computer Vision</u> , Vol. 1, (1996), 514-525	
		CROSS, A. D., "Inexact Graph Matching Using Genetic Search", <u>Pattern Recognition</u> , 30(6), (1997), 953-970	
		CYBENKO, G., "Pattern Recognition of 3D CAD Objects: Towards an Electronic Yellow pages of Mechanical Parts", <u>Smart Engineering Systems Design</u> , Vol. 1, (1997), 1-13	
		CYR, C. M., "3D Object Recognition Using Shape Similarity-Based Aspect Graph", <u>Proceedings of International Conference on Computer Vision</u> , (2001), 254-261	
		DI BAJA, G. S., et al., "(3,4)-Weighted Skeleton Decomposition for Pattern Representation and Description", <u>Pattern Recognition</u> , 27(8), (1994), 1039-1049	
		DIMRI, J., "Handling Sectional Views in Volume-based Approach to Automatically Construct 3D Solid from 2D Views", <u>Proceedings of the Geometric Modeling and Processing</u> , IEEE Computer Society, (2004), 1-12	

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07/29/2008

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		DORI, D., "Sparse Pixel Vectorization: An Algorithm and Its Performance Evaluation", <u>IEEE Trans. on Pattern Analysis and Machine Intelligence</u> , 21(3), (1999), 202-215	
		EFTHIMIADIS, E., "Interactive Query Expansion: A User-Based Evaluation in a Relevance Feedback Environment", <u>Journal of the American Society for Information Science</u> , 51(11), (2000), 989-1003	
		EGGLI, D. L., "Sketching with Constraints", <u>Master Thesis, University of Utah, Department of Computer Science</u> , (June 1994), 1-61	
		EL-MEHALAWI, M., "A Database System of Mechanical Components Based in Geometric and Topological Similarity. Part I: Representation", <u>Computer Aided Design</u> 35, (2003), 83-94	
		EL-MEHALAWI, M., "A Database System of Mechanical Components Based on Geometric and Topological Similarity. Part II: Indexing, Retrieval, Matching, and Similarity Assessment", <u>Computer Aided Design</u> 35, (2003), 95-105	
		ERIKSSON, F., "On the Measure of Solid Angles", <u>Mathematics Magazine</u> , 63(3) (1990), 184-187	
		FLYNN, P. J., "CAD-Based Computer Vision: From CAD Models to Relational Graphs", <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 13(2), (1991), 114-132	
		FUJIMOTO, A., et al., "ARTS: Accelerated Ray-Tracing System", <u>IEEE Computer Graphics and Applications</u> , 6(4), (1986), 16-26	
		FUNKHOUSER, T., "A Search Engine for 3D Models", <u>ACM Transactions on Graphics</u> , (2003), 1-28	
		GARZA, G., et al., "Synthesis of Solid Models of Polyhedra from their Orthogonal Views Using Logical Representations", <u>Expert System with Applications</u> , 14, (1998), 91-108	
		GÜNTHER, S., "Self-organizing map for clustering in the graph domain", <u>Pattern Recognition Letters</u> 23, (2002), 405-417	
		GUTTMAN, A., "R-Trees A Dynamic Index Structure For Spatial Searching", <u>Proceedings ACM SIGMOD International Conference on Management of Data</u> , (1984), 47-57	
		HILAGA, M., "Topology matching for fully Automatic Similarity Estimation of 3D Shapes", <u>Proceedings of ACM SIGGRAPH 2001</u> , (August 2001), 203-212	
		HORAUD, R. et al., "Structural Matching for Stereo Vision", <u>Proceedings 9th International Conference Pattern Recognition</u> , (1988), 439-445	
		HUANG, Z., et al., "High-level Feature Recognition Using Feature Relationship Graphs", <u>Computer Aided Design</u> 34, (2002), 561-582	
		IGARASHI, T., et al., "Teddy: A Sketching Interface for 3D Freeform Design", <u>Proceedings ACM SIGGRAPH 99</u> , (1999), 409-416	
		IP, C. Y., et al., "Using Shape Distributions to Compare Solid Models", <u>Proceedings of Solid Modeling</u> , (2002), 273-280	

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		IYER, S. "Identification and Ranking of Similar Parts in Agile Manufacturing", <u>Master Thesis, Graduate School, State University of New York at Buffalo</u> , (1995), 130 pgs.	
		KAO, C.-Y., "Extraction of 3D Object Features from CAD Boundary Representation Using the Super Relation Graph Method", <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 17(12), (1995), 1228-1233	
		KAUFMAN, A., "3D Scan-Conversion Algorithms for Voxel-Based Graphics", <u>Interactive 3D Graphics</u> , (October 23-24, 1986), 45-75	
		KAUFMAN, A., "An Algorithm for 3D Scan-Conversion of Polygons", <u>EUROGRAPHICS '87</u> , (1987), 197-208	
		KAZHDAN, M., "Harmonic 3D Shape Matching", <u>SIGGRAPH 2002, Technical Sketches</u> , (2002), 191	
		KEIM, D. A., "Efficient Geometry-based Similarity of 3D Spatial Databases", <u>Proceedings of SIGMOD '99</u> , Philadelphia, PA, (1999), 419-430	
		KIM, D. H., et al., "Graph Representation by Medial Axis Transform for 3D Image Retrieval", <u>Proceedings of SPIE, Vol. 4298 - Three Dimensional Image Capture and Applications IV</u> , (2001), 223-230	
		KOHONEN, T., "Chapter 3. The Basic SOM", in: <u>Self-Organizing Maps</u> , Springer Series in Information Sciences, Springer Verlag, Berlin, (1995), 86-103	
		KOLAK, O., et al., "On Ranking and Organizing Web Query Results", <u>Proceedings, IEEE Workshop on Knowledge and Data Engineering Exchange (KDEX '99)</u> , (1999), 26-33	
		KOUTAMANIS, A., et al., "Automated Recognition of Architectural Drawings", <u>Pattern Recognition, 1992, Vol. 1, Conference Computer Vision and Applications proceedings, IEEE Comp. Soc.</u> , (1992), 660-663	
		KRIEGEL, H.-P., et al., "3D Similarity Search by Shape Approximation", <u>Proceedings of the Fifth International Symposium on Large Spatial Databases (SSD '97), Lecture Notes in Computer Science</u> , (1997), 11-28	
		KRIEGEL, H.-P., "Approximation-Based Similarity Search for 3-D Surface Segments", <u>Geoinformatica 2:2</u> , (1998), 113-147	
		KRIEGEL, H.-P., "Spatial Data Management for Computer-Aided Design", <u>Proceedings ACM SIGMOD, International Conference on Management of Data (SIGMOD '01)</u> , Santa Barbara, CA, (2001), 614	
		LAI, C. P., et al., "Detection of Dimension Sets in Engineering Drawings", <u>Proceedings of the Second International Conf. on Tsukuba, IEEE Computer Society</u> , (1993), 606-613	
		LEE, H. K., "Applying Neural Network to Combining the Heterogeneous Features in Content-Based Image Retrieval", <u>Proceedings SPIE Applications of Neural Networks in Image Processing VI</u> , Vol. 4305-13, (2001), 81-89	

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		LEE, J. Y., et al., "Network-centric Feature-based Modeling", <u>IEEE Proceedings of the 7th Pacific Conference on Computer Graphics and Applications</u> , (1999), 280-289	
		LIU, SHI-XIA, "A Matrix-Based Approach to Reconstruction of 3D Objects from Three Orthographic Views", <u>The Eighth Pacific Conference on Computer Graphics and Applications</u> , (2000), 254-261	
		LOZANO, S., et al., "Training Feedforward Neural Networks Using A Genetic Line Search", <u>Artificial Neural Networks for Intelligent Engineering (ANNIE '97)</u> , (1997), 119-124	
		MARKOWSKY, G., et al., "Fleshing Out Wire Frames", <u>IBM Journal of Research and Development</u> , 24 (5), (1980), 582-597	
		MCWHERTER, D. "An Approach to Indexing Databases of Graphs", <u>Proceedings of the 27th VLDB Conference</u> , (2001), 19 pgs.	
		MCWHERTER, D., "Database Techniques for Archival of Solid Models", <u>Proceedings of the Sixth ACM Symposium on Solid Modeling and Applications</u> , (2001), 78-87	
		MCWHERTER, DAVID, "Solid Model Databases: Techniques and Empirical Results", <u>ASME Journal of Computing and Information Science in Engineering</u> , 1(4), (2001), 300-310	
		MEERAN, S., "A generic approach to recognising isolated, nested and interacting features from 2D drawings", <u>Computer Aided Design</u> 31, (1999), 891-910	
		MESSMER, B. T., "Subgraph Isomorphism in Polynomial Time", <u>Technical Report IAM 95-003, University of Bern, Institute of Computer Science and Applied Mathematics, Bern, Switzerland</u> , (1995), 1-33	
		MESTETSKII, L. M., "Skeletonization of Polygonal Figures Based on the Generalized Delaunay Triangulation", <u>Programming and Computer Software</u> , 25(3), (1999), 131-142	
		MIN, PATRICK, et al., "A 2D Sketch Interface for a 3D Model Search Engine", <u>SIGGRAPH 2002 Technical Sketches</u> , (July, 2002), 138	
		MONTANARI, U., "A Method for Obtaining Skeletons Using a Quasi-Euclidean Distance", <u>Journal of the Association for Computing Machinery</u> , 15(4), (1968), 600-624	
		MOTZKIN, T. S., "Maxima for Graphs and a New Proof of a Theorem of Turan", <u>Canadian Journal of Math</u> , 17, (1965), 533-540	
		MUNEEASAWANG, P., "Multiresolution-Histogram Indexing and Relevance Feedback Learning for Image Retrieval", <u>IEEE International Conference on Image Processing</u> , Vol. 2, (2000), 526-529	
		MYERS, R., "Bayesian Graph Edit Distance", <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 22(6), (June 2000), 628-635	

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Group Art Unit	2173
Examiner Name	Unknown

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OTHER DOCUMENTS – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T*
		NAGASAKA, Y., et al., "Extracting and Learning Geometric Features based on a Voxel Mapping Method for Manufacturing Design", <u>Proceedings of IPMM2001</u> , (2001), 1-10	
		NAKAZATO, M., et al., "3D MARS: Immersive Virtual Reality for Content-Based Image Retrieval", <u>IEEE International Conference on Multimedia and Expo</u> , Piscataway, NJ, USA, (Aug 22, 2001), 44-47	
		NOVOTNI, M., "A Geometric Approach to 3D Object Comparison", <u>SMI 2001 International Conference on Shape Modeling and Applications</u> , (2001), 167-175	
		OHBUCHI, R., "Shape-Similarity Search of Three-Dimensional Models Using Parameterized Statistics", <u>Proceedings of the Pacific Graphics</u> , (October 9-11, 2002), 1-10	
		OSADA, R., et al., "Matching 3D Models with Shape Distributions", <u>Proceedings of the International Conference on Shape Modeling & Applications</u> , (2001), 154	
		OSADA, R., "Shape Distributions", <u>ACM Transactions on Graphics</u> , 21(4), (2002), 807-832	
		PAJDLA, T., et al., "Recovering CAD Models from scanned Data", <u>Presented at Electronic Imaging and the Visual Arts (EVA 98)</u> , (Nov., 1998), 10 pgs.	
		PALAGYI, K., "A 3D 6-subiteration thinning algorithm for extracting medial lines", <u>Pattern Recognition Letters</u> 19, (1998), 613-627	
		PAPADOPOULOS, A. N., et al., "Structure-Based Similarity Search with Graph Histograms", <u>Database and Expert Systems Applications, 10th International Workshop on Database and Expert Systems Applications, IEEE Computer Society</u> , (1999), 174-178	
		PEABODY, M., "Clustering Solid Models for Database Storage", <u>Technical Report DU-MCS-01-04</u> , (June 2001), 1-18	
		PEABODY, M., "Clustering Techniques for Databases of CAD Models", <u>Technical Report DU-MCS-01-01</u> , (June 2001), 1-17	
		PELILLO, M., et al., "Continuous-Based Heuristics for Graph and Tree Isomorphisms, with Application to Computer Vision", <u>Approximation and Complexity in Numerical Optimization: Continuous and Discrete Problems</u> , Kluwer Academic Publishers, Boston, MA, (1999), 1-24	
		PELILLO, M., "Matching Hierarchical Structures Using Association Graphs", <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 21(11), (1999), 1105-1120	
		PINEDA, L., "A Model for Multimodal Reference Resolution", <u>Computational Linguistics</u> , 26(2), (2000), 139-193	
		RAMESH, M., "Feature Based Shape Similarity Measurement for Retrieval of Mechanical Parts", <u>Journal of Computing and Information Science in Engineering</u> , 1 (2001), 245-256	

EXAMINER

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		REA, H. J., "Part-Sourcing in a Global Market", <u>Proceedings of ICeCE, International Conference on eCommerce Engineering: New Challenges for Global Manufacturing in the 21st Century</u> , (September 2001), 1-8	
		REEVES, A. P., "Three Dimensional Shape Analysis Using Moments and Fourier Descriptors", <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 10(6), (1988), 937-943	
		REINDERS, F., "Skeleton Graph Generation for Feature Shape Description", <u>Data Visualization 2000, Eurographics</u> , (2000), 73-82	
		ROUSSINOV, D. G., et al., "Information Navigation by Clustering and Summarizing Query Results", <u>IEEE Proceedings of the 33rd Annual Hawaii International Conference on System Sciences</u> , Piscataway, NJ, USA, (2000), 797-806	
		ROUSSOPOULOS, N., "Nearest Neighbor Queries", <u>Proceedings of ACM Sigmod</u> , (1995), 71-79	
		SAINZ, M., "Carving 3D Models from Uncalibrated Views", <u>5th IASTED International Conference Computer Graphics and Imaging (CGIM 2002)</u> , (2002), 144-149	
		SANFELIU, A., et al., "A Distance Measure Between Attributed Relational Graphs for Pattern Recognition", <u>IEEE Transactions on Systems, Man, and Cybernetics</u> , Vol. SMC-13, No. 3, (May/June 1983), 353-362	
		SAUPE, D., et al., "3D Model Retrieval With Spherical Harmonics and Moments", <u>Proceedings of the 23rd DAGM-Symposium on Pattern Recognition</u> , (2001), 392-397	
		SCHETTINI, R., et al., "Content-based Color Image Retrieval with Relevance Feedback", <u>1999 International Conference on Image Processing</u> , 1999. ICIP 99. Proceedings., (1999), 75-79	
		SONI, S., et al., "Handling Solids of Revolution in Volume-Based Construction of Solid Models From Orthographic Views", <u>Journal of Computer and Information Science and Engineering</u> , 3(3), (2003), 250-259	
		SRINIVAS, G., et al., "Retrieval of Similarly Shaped Parts From a CAD Database", <u>IEEE International Conference on Systems, Man, and Cybernetics</u> , 3, (1998), 2809-2814	
		SUH, T. J., "Two Phase 3D Object Reconstruction from Two-View Drawings", <u>IEICE Transactions Inf. & Syst.</u> , Vol. E82-D, No. 7, (1999), 1093-1100	
		SUN, T.-L., "Shape Similarity Assessment of Polyhedral Parts Based on Boundary Models", <u>International Journal of Product Research</u> , 38(18), (2000), 4655-4670	
		SUZUKI, MOTOFUMI, "A Similarity Retrieval of 3D Polygonal Models Using Rotation Invariant Shape Descriptors", <u>IEEE International Conference on Systems, Man, and Cybernetics</u> , 4, (2000), 2946-2954	

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		SVENSSON, S., et al., "Curve Skeletonization of Surface-like Objects in 3D Images Guided by Voxel Classification", <u>Pattern Recognition Letters</u> , 23(12), (2002), 1419-1426	
		TANGELDER, J. W., et al., "Polyhedral Model Retrieval Using Weighted Point Sets", <u>Shape Modeling International</u> , 2003, (2003), 119-129	
		TATEMURA, J., "Graphical Relevance Feedback: Visual Exploration in the Document Space", <u>Proceedings of the 2000 IEEE International Symposium on Visual Languages (VL'00)</u> , (2000), 39-46	
		ULLMANN, J. R., "An Algorithm for Subgraph Isomorphism", <u>Journal of the Association for Computing Machinery</u> , 23(1), (1976), 31-42	
		VESANTO, J., "Using SOM in Data Mining", <u>Licentiate's Thesis, Helsinki University of Technology, Department of Computer Science and Engineering</u> , (April 2000), 50 pgs.	
		VRANIC, D. V., "3D Model Retrieval", <u>Computer Graphics and Image Processing (CGIP)</u> , (2001), 2 pgs.	
		VRANIC, D. V., et al., "3D Model Retrieval", <u>Proceedings of SCCG 2000</u> , (2000), 5 pgs.	
		VRANIC, D. V., et al., "3D Shape Descriptor Based on 3D Fourier Transform", <u>Proceedings of the EURASIP Conference on Digital Signal Processing for Multimedia Communication and Service (ECMCS 2001)</u> , (2001), 271-274	
		VRANIC, D. V., "Tools for 3D-Object Retrieval Karhunen-Loeve Transform and Spherical Harmonics", <u>Proc. of the IEEE 2001 Workshop on Multimedia Signal Processing</u> , (2001), 293-298	
		WENYIN, L., "Impact of Sparse Pixel Vectorization Algorithm Parameters on Line Segmentation Performance", <u>Proceedings 3rd IAPR Workshop on Graphics Recognition</u> , (1999), 323-330	
		WOO, T. C., "Visibility Maps and Spherical Algorithms", <u>Computer-Aided Design</u> , 28(1), (1994), 6-16	
		XAVIER, P. G., "Content-Based Search on a Database of Geometric Models", <u>Sandia Report</u> , (1998), 1-35	
		ZHANG, NIAN, et al., "A Comparative Study of Neural Networks Based Learning Strategies for Collective Robotic Search Problem", <u>Proceedings of SPIE Vol. 4390</u> , (2001), 224-235	
		ZHANG, C., "An Active Learning Framework for Content Based Information Retrieval", <u>Electrical & Computer Engineering, Carnegie Mellon University</u> , 1-28	
		ZHAO, T., "Visual Keyword Image Retrieval Based on Synergetic Neural Network for Web-based Image Search", <u>Real-Time Systems</u> , 21, Kluwer Academic Publisher, (2001), 127-142	

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